

Abstract

A recombinant hybrid virus, including: (a) a deleted adenovirus vector genome comprising the adenovirus 5' and 3' *cis*-elements for viral replication and encapsidation, and further comprising a deletion in an adenovirus genomic region selected from the group consisting of: (i) the polymerase region, wherein said deletion essentially prevents the expression of a functional polymerase protein from said deleted region and said hybrid virus does not otherwise express a functional polymerase protein, (ii) the preterminal protein region, wherein said deletion essentially prevents the expression of a functional preterminal protein from said deleted region, and said hybrid virus does not otherwise express a functional preterminal protein, and (iii) both the regions of (i) and (ii); and (b) a recombinant adeno-associated virus (AAV) vector genome flanked by the adenovirus vector genome sequences of (a), said recombinant AAV vector genome comprising (i) AAV 5' and 3' inverted terminal repeats, (ii) an AAV packaging sequence, and (iii) a heterologous nucleic acid sequence, wherein said heterologous nucleic acid sequence is flanked by the 5' and 3' AAV inverted terminal repeats of (i). Methods of making and using the recombinant hybrid virus are also disclosed.